

Appn. No.: 10/676,362
Reply to Office Action dated 7/14/2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claim 11 has been amended as follows:

Listing of Claims:

1. (Previously presented) A printing apparatus for use in a continuous high velocity document processing system, the printing apparatus comprising:

a transport path conveying a series of documents at a print velocity;

an upstream print head contiguous with the transport to print on documents transported thereon;

a downstream print head, downstream of the upstream print head, and contiguous with the transport to print on documents transported thereon;

a controller controlling a first one of the upstream or downstream print heads to print on transported documents, the controller further switching to a second of the upstream or downstream print heads when the first one is out of service.

2. (Previously presented) The printing apparatus of claim 1 wherein the documents are mail pieces and further comprising a postage meter coupled to the print heads, whereby postal indicia are printed on the mail pieces.

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3. (Previously presented) The printing apparatus of claim 2 wherein the print heads are ink jet print heads.

4. (Previously presented) The printing apparatus of claim 3 wherein the controller periodically takes the print head that is in use out of service to perform maintenance operations.

5. (Previously presented) The printing apparatus of claim 4 wherein the maintenance operation is a print head wipe.

6. (Previously presented) The printing apparatus of claim 4 wherein the maintenance operation is a print head purge.

7. (Previously presented) The printing apparatus of claim 4 wherein the upstream and downstream print heads are comprised of drop-on-demand print heads.

8. (Previously presented) The printing apparatus of claim 1 wherein the controller switches from using the first print head to the second print head when a failure is detected in the first print head.

9. (Previously presented) The printing apparatus of claim 1 further comprising at least one sensor upstream of the first or second print head detecting a document approaching the upstream or downstream print head, the controller triggering the upstream or downstream

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print head based on a predetermined interval subsequent to detecting the document, controller adjusting the predetermined interval depending on which of the upstream or downstream

print head is in use to account for the different locations of the upstream and downstream print heads.

10. (Previously presented) The printing system of claim 1 wherein the print heads are electronically geared to the transport so that variations in print velocity during a printing operation will not affect an image being printed.

11. (Currently amended) A printing method for continuous high velocity document processing, the printing method comprising:

transporting a series of documents at a print velocity;

positioning an upstream print head contiguous with the-a transport to print on documents transported thereon;

positioning a downstream print head, downstream of the upstream print head, and contiguous with the transport to print on documents transported thereon;

controlling a first one of the upstream or downstream print heads to print on transported documents; and

switching to a second of the upstream or downstream print heads for printing when the first one is out of service.

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12. (Previously presented) The printing method of claim 11 further comprising printing postal indicia on mail pieces by coupling a postage meter to the print heads.

13. (Previously presented) The printing method of claim 12 wherein the step of printing comprises ink jet printing.

14. (Previously presented) The printing method of claim 13 further comprising periodically removing the print head that is in use out of service and performing maintenance operations on the print head.

15. (Previously presented) The printing method of claim 14 wherein the maintenance operation is a print head wipe.

16. (Previously presented) The printing method of claim 14 wherein the maintenance operation is a print head purge.

17. (Previously presented) The printing method of claim 14 further comprising using drop-on-demand ink jet printing for the upstream and downstream print heads.

18. (Previously presented) The printing method of claim 11 wherein further including switching from using the first print head to the second print head when a failure is detected in the first print head.

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19. (Previously presented) The printing method of claim 11 further comprising detecting a document approaching the upstream or downstream print head, triggering the upstream or downstream print head based on a predetermined interval subsequent to detecting the document, and adjusting the predetermined interval depending on which of the upstream or downstream print head is in use to account for the different locations of the upstream and downstream print heads.

20. (Previously presented) The printing method of claim 11 further including electronically gearing the print heads to the transport so that variations in print velocity during printing will not affect an image being printed.